

CROSSFEED

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PPE

Problems and Solutions for Respirator Storage

By AMCS(AW) Robert Chenard

Problem: Almost half of the commands surveyed in FY-07 did not store respirators properly. This error can lead wearers to inhale particulate matter, or the respirator becoming distorted to the point that it no longer provides adequate protection.



Solution: OPNAVINST 5100.19E, Paragraph B0609 tells users to place respirators in a clean plastic bag or other container. It goes on to say that zip-lock bags are preferred, and users should make sure the respirator is completely dry to prevent mildew. It also addresses the fact that they should be stored “flat” in a clean, dry and uncontaminated area, urging that users not “crowd them” to avoid distorting the face piece. This hint especially is true for respirators that are not used frequently—like those in small composite repair facilities or those used for fit test.

Best Practice: MALS-31’s 500 division, which has a light respirator workload, has a good idea.



They use sterile storage bags from Georgia Steel and Chemical Company, Inc. One box has 48 bags that are 8 inches by 5 inches by 26 inches and comes with bag seals, which they use to write down the date last cleaned and inspected. This technique doesn’t eliminate the need to maintain a historical record of the inspections, but it quickly identifies that the respirators are stored properly and are readily available to protect their people—the real purpose behind specific storage requirements.

Senior Chief Chenard is a maintenance analyst at the Naval Safety Center.

Airframes

Let's Talk Nuts, Bolts and Structural Hardware

By AMC(AW) James Litviak

Problem: Thousands of incidents have occurred since the beginning of naval aviation because of the improper use of structural hardware. We experienced everything from loss of life, catastrophic failure of critical components, foddied engines, to a simple locknut missing for the jumper wire on a landing-gear door. In the fleet, we often see pre-expended bins that have screws mixed with nuts, washers mixed with cotter pins, and hardware that doesn't even apply to aviation.

Solution: The illustrated-parts manual for specific platforms and the NA 01-1A-8, "Structural Hardware Manual," are the bibles to follow. All airframers should be familiar with these manuals and become experts on the content. You should know the difference between tensile and shear strength and cad-

mium plating vice stainless steel. Supervisors and CDIs must make sure the right hardware is available when tasked to do a job. Supervisors, also must inventory pre-ex material, and get rid of that "100 year bin." Hold training on using the right hardware, and discuss the effects of using substandard items. These steps will make equipment last longer.

Best practice: The best squadrons I've seen have centralized and controlled pre-expended bins with accurate inventory, and they are managed in accordance with COMNAVAIRFOR 4790.2. Specific shops in these commands accurately document consumable parts, by part number, on the VIDS/MAFs.

Chief Litviak is a maintenance analyst at the Naval Safety Center.

Fixing Airframe-Related Problems — Part I

By AMCS(AW) Robert Chenard

Problem: During my surveys, it is evident that a number of program managers are not following their program references.

Solution: I look at six programs and do so around the fleet. If you want to make your program "above average," you need to follow all the related program references. Here are some helpful hints:

Hydraulic Contamination: The electronic particle counter (EPC) logbook and the QA trend-analysis record go hand in hand. COMNAVAIRFORINST 4790.2, Vol. V, para. 6.3h(11) says that the worker must "ensure all hydraulic samples performed are sent to QA for hydraulic contamination control, trend analysis." So a sample in the EPC log must be in the QA trend record, too.

I also recommend taking this requirement a step further and document patch-test results, as well. This step will ensure your people record and deliver hydraulic-sample results, regardless of the method used—then make sure any required sample entries are annotated in the aircraft logbook or support-equipment record.

Tire and Wheel: Check your jacks! If the load-

test date is expired, the jacks must be turned in. If you don't, this error will set your command's SE PMS program below average.

CNAF 4790.2, Vol. V, para. 7.3c(2) says the program manager shall "provide follow-on training as necessary." Your supply/expediter personnel handle tires frequently, but they aren't getting regular safety reminders like the "tire changers" do. I recommend you provide training for them on a quarterly basis and document it. A simple tip is to put a muster sheet in the program binder, as well as the individual training record, to track who has missed the training, so you can get them up to speed.

Corrosion Control—CNAF 4790.2, Vol. V, para. 14.4a(5), (6) and (7)(a)(b), is very clear on the make up of the corrosion-control work center. CNAF 4790.2, Vol. I, par. 1.4c(2)(a) covers "deviation requests based solely on manpower constraints."

CNAF 4790.2, Vol I, Chap 10.3.1, "Aircraft and Support Equipment Painting," is three pages of revisions that you and your respiratory-protection program manager need to be aware of. This section should be included in your program references.

Volatile organic compound (VOC) is defined in CNAF 4790.2, Vol. I, Chap. 10.3.1c., NAVAIR 01-1A-509, Vol. 2, App. A, para. A-4.1.1. states, "It is the responsibility of the user activity to ensure that applicable rules are understood and obeyed." Check with your local base environmental office to see if this area applies to you. App. A discusses VOC in great detail and provides a list of VOC-compliant chemicals.

Emergency Reclamation—CNAF 4790.2, Vol. V, para. 14.3b(14) says to "conduct and document quarterly training and drills" and that "the drills shall encompass specific maintenance and all emergency-reclamation procedures." I recommend you keep a memo about the drill, muster report of the members who attended, and description of the scenario. Keep this information in your program binder for easy reference.

NA01-1A-509, Chap. 9, para. 9-3.3 and table 9-2 describe the items you need to have in your ERT kit. Table 9-2 specifically calls for full-face respira-

tors and para. 9-9.1.5 explains why. 29 CFR, Part 1910, para. 1910.134(h)(3)(i)(b) requires your RPPM to inspect and clean the respirators every month, unless they are new and never have been removed from the manufacturers, original packaging—take time to document this fact.

Respiratory-Protection Program Manager—The RPPM needs to be designated in writing by the commanding officer, and the CO cannot delegate this signature authority. For commands with long-term detachments, I recommend assigning RPPM assistants to manage the program at the detachment site, but program responsibility still rests with the RPPM.

OPNAVINST 5100.23G, dated December 2005, required the RPPM to do an annual self-audit on the program. This review is different from the QA audit on the corrosion program. OPNAVINST 5100.19E, App. B6-A, has a useful checklist.

Senior Chief Chenard is a maintenance analyst at the Naval Safety Center.

Paraloft

Riggers Making More Work for Themselves

By PRC(AW) Brian Westcott

Problem: Parachute riggers are cited in too many HMRs, and risk assessments on the ALSS gear often come out coded as a 1E. The result: A bulletin likely is issued, and PRs receive more of them than any other group in NAVAIR.

Unfortunately, most of the HMRs we're seeing often are because riggers didn't pack ALSS in accordance with the pubs. We simply are overlooking basic CDI steps. I understand that our shops are undermanned, but how many more errors can we accept?

In the last eight years, parachutes had 39 bulletins, life preservers 50 bulletins, and life rafts 59 bulletins. In 2007 alone, NAVAIR issued 11 bulletins for life preservers and 15 on life rafts. These items are a direct result of non-compliance with procedures, and that performance is unacceptable.

In just one week, NAVAIR saw the following HMRs: Life preservers packed with the wrong CO₂ bottle, retaining nut missing on an LRU-18 inflator, new quick disconnect on the LPFC misrouted, and buckles falling off. Any of these items could result in a bulletin.

Solution: Every mistake we make means more work. Visit the EI website and see the reports received on a daily basis. Do the job right, and you'll help reduce the workload.

It's time we get back to basics. Open the publications and read them. Use training time to really get into the weeds and find out what we are responsible for. Ensure CDIs and CDQARs actually are doing their work.

Best Practices: I have seen some good commands but don't have one to single out. However, the best squadrons know publications change, at times, daily. The PR rating is becoming more complex, and good commands use the book to find out about changes. Those that don't are doing an injustice to their aircrew. We need to get a handle on this major issue, or bulletins will continue to be sent. It raises the question: Will ALSS work correctly when needed?

Chief Westcott is a maintenance analyst at the Naval Safety Center.

Electrical

Multimeter Test Leads Can Cause Trouble

By AEC(AW) James Esslinger

Problem: Too many avionics workcenters are using safety wire on the ends of multimeter test leads used to probe connector-plug pins during troubleshooting. The big hazard is a real potential for being electrocuted during troubleshooting, as well as inducing voltages to circuits which otherwise should be de-energized.

Solution: Get your supply or tool-room coordinator or the wing to buy the right test-lead kits to troubleshoot connector-plug pins, such as the kit model No. TL 82 available from Fluke corporation. These kits can run from \$60-70. With a little help from the PR shop, a neat pouch can be built with individual slots for easy accounting of the



test probes, test leads, and probe ends. Safety is the main concern, and with today's high-end electronics, we need to reduce unintentional energizing of other circuits, too.

Best Practice: I'm new to the Naval Safety Center and can't name a specific command using the right leads. But from feedback, I know some

squadrons are using them. More will do so after reading this story.

Chief Esslinger is a maintenance analyst at the Naval Safety Center.

Class C Mishap Summary

By ADCS(AW) Mike Tate

From May 16, 2007 to September 19, 2007, the Navy and Marine Corps had 20 class C Mishaps involving 21 aircraft. The cost of these incidents was \$1,605,607.

Some of the incidents during the quarter included several TFOAs, a passenger falling in an aircraft, aircraft damage while towing, SE damage while moving, and drop-tank while dropping.

The TFOAs often involve poor maintenance and inspection techniques. We need to tighten up our game in those areas. Loose gear coming off aircraft in flight is a danger to the aircraft, aircrew and people on the ground. Crunches continue to be a problem. We must follow all the rules about towing aircraft and equipment. If the sea state is high or the deck is slick, we need to identify those problems, set controls, and move the aircraft when safe. Dropped drop-tanks have been a problem that

has plagued maintainers in the past, and, after a period of inactivity, it appears that the problem has reared its ugly head, again. Fortunately, no one was injured, but we need to check the tanks to make sure they are empty—the thump test doesn't work. Open the cap, look inside, and use a dip check. Those simple steps are the only way to make sure tanks with fuel aren't dropped.

Senior Chief Tate is a maintenance analyst at the Naval Safety Center and coordinator of the Crossfeed section of Mech.

Survey Schedule

February 2008

NAF Atsugi

March 2008

NAWS Point Mugu

April 2008

NAS Lemoore

May 2008

MCAS Cherry Point

NAS New River